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No. 1.

Contributed Articles.

On Important Apiarian Subjects.

The Production of Extracted Honey.

The first in a series of articles on the subject.

BY CHAS. DADANT.

Until about 30 years ago there were but three ways of harvesting honey, viz.: by smothering the bees with brimstone burning under the hives to get the entire contents of the box; by driving out the bees for the same purpose; and by placing caps, or boxes, on the top of the hives, to secure the surplus honey.

The smothering of bees, which has been practiced for thousands of years, is yet carried on in some parts of Europe.



CHAS. DADANT.

Even not far from Paris, the center of civilization and refinement, in Gatinais—a district where the sainfoin (literal translation, "healthy hay"), or French grass, is as extensively cultivated as timothy and clover in North America—this custom of the dark ages seems to still prevail with quite a number of people.

Every spring these bee-keepers of Gatinais purchase colonies in box or straw hives—swarms of the previous year. These purchases extend several hundred miles away, and the colonies are sent, by carloads, to the Gatinais apiaries, where the bees are brimstoned as soon as the hive has been filled on the flowers of the sainfoin. As there are two varieties of this



C. P. DADANT.

plant, one blooming a little later than the other, it gives a large quantity of honey, unsurpassed in quality. It is to be much regretted that this good honey and forage leguminous plant cannot be grown successfully here. Was it ever tried in the West—in Colorado, California, or Oregon?

The profits thus obtained by the producers of the swarms, and by the slaughterers of the bees, are so large that they delay the introduction of movable-frame hives in the villages where these customs prevail.

After the bees have been killed, the combs are cut out of the hives and sorted. Then each grade is put into a solar honey-extractor, or in a tin box, subjected to a high temperature. After a few days, the honey having been drawn out, the remaining combs are put under a powerful press, to obtain what little honey may remain in the wax.

The second method employed—that of driving out the

bees—is not as cruel and destructive as the brimstone method; but it does not give as great results as the Gatinais method.

The use of caps, or large boxes, in which the bees place their surplus, was one step towards progress; but the combs had to be broken to be removed from the box.

The invention of the movable frame, and of the honey-extractor, has afforded bee-keepers the means of taking out of the hives the combs loaded with honey, and of returning them to the bees when empty, without damaging them, or injuring, or killing a single bee. Every one of my readers undoubtedly uses movable-frame hives and honey-extractors, but, to some of them, the history of the invention of the honey-extractor will, no doubt, be interesting.

In 1866, a Major of the Austrian army—Von Hruschka—who lived in Dolo, a village near Venice, Italy (at that time Lombardy and Venetia belonging to Austria), had a few colonies of bees in his garden. One day, while examining the hives, he gave his little son a piece of comb honey in a saucer, to take to the house. The boy put the saucer in his school basket, and, in play, whirled it around his head. Then Hruschka noticed that the motion had forced the honey out of the comb into the dish. Enlightened by this unexpected experiment, Von Hruschka made a square tin box with a quadrangular slanting bottom closed with a cork, and furnished with a wire-gauze inside, to support the comb, and, suspending it on an iron handle, he revolved it around his head, as his son had done with the dish. (See Fig. 1.)

He soon, however, improved upon this slow method, and invented a machine made of a wooden pillar supported by a pyramidal frame of three wooden posts, and carrying a revolving horizontal cross-beam 12 feet in length, at the ends of which two extracting boxes, or baskets, were fastened. This machine was turned by two men, with ropes as motors, one of these ropes winding around the vertical axis while the other rope was being unwound. (See Fig. 2.)

Although this extractor was very simple, it was too cumbersome and expensive to manage. Hruschka then made an extractor, which was exhibited at the Paris Exposition of insects in August, 1868, and another that was shown at the bee-keepers' exhibit in Milan, Italy, in December of the same year. These machines were both entered under the name of Angelo Lessame, of Dolo, Venetia. They were made much like the extractors of to-day, of a square basket covered with wire-gauze and revolving inside of a tin can. They were small machines, although made for four combs, for they had been made for the frames of the standard German hives, the combs

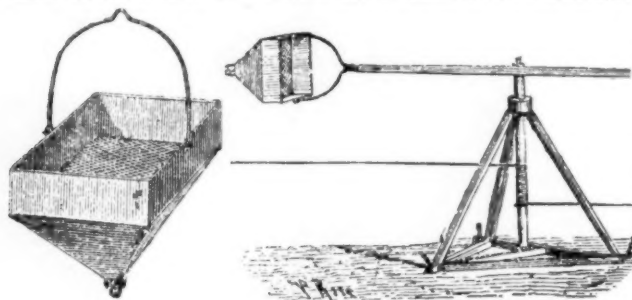


Fig. 1. The First Honey-Extractors. Fig. 2.

of which are only 10x10 inches. The basket was revolved by two wheels, one at the middle, the other at the side, and connected by an endless rope. (See Fig. 2.)

The machine which was exhibited at Paris was sold to Hamet, the founder and publisher of the bee-journal, *L'Apiculteur*, for the small sum of \$5.00. Hamet, who was not at all a progressive man, did not buy the machine for use, but only as a curiosity for his apian collection, and in mentioning this machine in his journal, he branded it as a "useless toy." Little did he think of the future that awaited this ma-

chine, in which he had no more faith than he had in the movable-frame hives, the only superiority of which, he said, was that they could be taken to pieces like a "puppet show."

I have reasons to believe that the exhibitor of these first extractors, Mr. Lessame, had bought the apiary and fixtures of Major Von Hruschka; for the latter, having resigned his position in the Austrian army when Venetia was ceded to Italy in 1866, sold his property in Dolo, and tried to earn a living by building a large hotel in Venice. Unfortunately, he met with ill-success, and died in poverty, after a number of

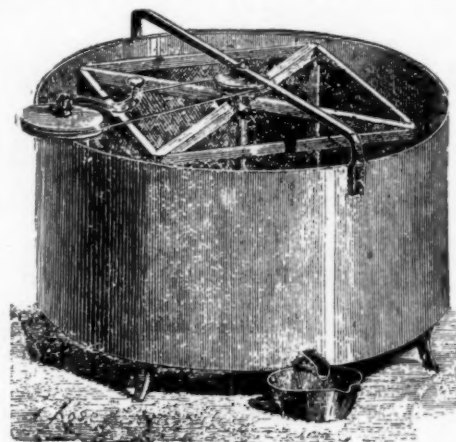


Fig. 3—Hruschka's Honey-Extractor.

years of sorrow and trouble. The unfortunate circumstances of the after-life of this man, who had rendered so great a service to the bee-keepers of the world, were not known until several years after his death, for he was modest and unassuming, and avoided speaking of his affairs. Had he taken a patent on his invention, instead of leaving it to others, he would have probably become rich.

As soon as it was published in bee-papers, many bee-keepers made use of the discovery, and manufactured centrifugal extracting machines. Mr. Adair, of Kentucky, followed the first idea of Hruschka, by making an extractor of two baskets revolving around a central pivot. Later, extractors were made in which the entire machine, including the can, revolved together.

Hamilton, Ill.

(To be continued.)



How Many Colonies of Bees Shall We Keep?

BY G. M. DOOLITTLE.

In Peter Henderson's "Gardening for Profit," will be found some statements of remarkable things done by those who are making land produce the largest possible profits per acre, and of late I have felt to wondering if a lesson could not be drawn from it for many of us who think we are on the right road to successful apiculture.

There seems to be a growing tendency, of late, to multiply our number of colonies, rather than to see how good results can be obtained from a few. In other words, we are using four acres of land, and expending more labor, to produce the same results which these men of thrift, mentioned in Mr. Henderson's work, achieve on their one acre. The question which arises is, Can, or cannot, the bees be worked on the same plan, so that 50 colonies will produce as good results, with less labor, than is gotten from 200 worked in the way many apiaries are worked? I believe they can, and think that the day is coming when one colony will be made to produce as good results as two are now doing, if they do not equal four.

All who have read those Australian reports of 800 to

1,200 pounds of honey from each colony, in large apiaries, on an average, will see that we are not up to our high privilege here in the United States. While not up to Australia, yet I find by a careful study of our own bee-papers that it is no unusual thing to see reports where 50 colonies of bees have produced 5,000, 6,000, 7,000, and even 8,000 pounds of honey, while I have yet to see a report quadrupling such where four times the number of colonies were kept. I oftener find that 200 colonies give but little if any better results than do 50, while I know that more work is required to care for 200 during a year, than is required for 50. To this work we have to add the extra expense of hives, sections, etc., together with the large amount of honey it takes to feed those extra 150 colonies. This last, in my opinion, is wherein lies the main trouble in making a large number produce as many pounds per colony as do a few.

From careful experiments and observations, I am led to believe that it takes at least 60 pounds of honey to carry one colony of bees through the year; hence, if we only get 30 pounds from a colony (an average yield that some bee-keepers tell me they are satisfied with), we get only one-third of the honey our bees gather, to pay us back for all our labor and capital invested; and also only one-third of the product of our field. This product of the field cannot be overlooked, as I have reason to believe, from past experience.

Quite a number of years ago I was enabled to secure an average of 166 pounds of comb honey from each of 67 colonies of bees, spring count, as the average result of a single season, and as honey sold at that time at 25 cents a pound, this caused a great excitement in my neighborhood, and many went into bee-keeping until I could count over 500 colonies of bees within a distance of two miles from my house, the result of which was a gradual lessening of the surplus honey per colony, so that little more honey in the aggregate was obtained from the 500 colonies than I obtained from the 67.

A few years later a hard winter reduced the number of colonies by about three-fifths, and the result was, that, during the season following, my average per colony was nearly 120 pounds of surplus comb honey, and the aggregate amount of surplus was about the same as from the 500. At 60 pounds of honey as food for a colony, it would take 30,000 pounds for 500 colonies. To this add a surplus of 15,000 pounds, which is about what was obtained where the 500 were kept, and we have 45,000 pounds as the product of our field, two-thirds of which was consumed by the bees.

The season after the hard winter, we had about 200 colonies on the same field, which consumed only 12,000 pounds for their wants, leaving 33,000 pounds as surplus. As the 200 gave about 120 pounds each as surplus, or 24,000 pounds in all, we had 9,000 pounds going to waste for lack of gatherers, thus giving 250 colonies as about the right number for our field, providing the field remains the same, and we allow that 120 pounds to be set down as a surplus with which all should be satisfied. I believe it possible that bees can be so worked that 200 pounds can be secured as a surplus from each old colony in the spring, in which case 175 colonies would be sufficient for our field. Now I candidly ask the reader if we had not better keep the number in our field at 175, thus securing 35,000 pounds of the 45,000 as a surplus, rather than keep 500 colonies and receive only 15,000 of the 45,000 pounds as pay for our labor, letting the bees consume the rest. In other words, can we not make a few bees do for us what the market-gardeners of the large cities make a small piece of land do for them, namely, secure as much profit from an acre of land as some of our country people do from their tens of acres?

Many an apiarist has allowed his bees to increase until he secured but little surplus from them, and then wondered why his bees were not as profitable to him as they were in years

gone by, apparently not even dreaming that it took nearly or quite all of the product of his field to supply the wants of the bees as their board.

I know that the above line of reasoning cannot be made mathematically correct, yet there is in this thing a large and unexplored region well deserving of our best thoughts and efforts at this time of low prices, and, as a rule, small surplus. Who will be the first to work it out for us more practically than anything before done? Borodino, N. Y.



Suggestions About the Bee-Keepers' Union.

BY G. W. DEMAREE.

I want to suggest that the proper thing to do is to elect a new set of officers for the National Bee-Keepers' Union. I think a change, from time to time, is best for all such institutions.

Let all sentiment be laid aside, and let each member vote for some intelligent "bee-man" (our sister bee-keepers have a higher mission than is found in court decisions); properly distributing the number to be elected throughout the country as justly as is practically possible.

As to any change pertaining to "General Manager," that can safely be left to the judgment of the members. I can see no reason for any change in that respect, as the office of "General Manager" is hedged about by a board of directors—the President and Vice-Presidents. As one of the "old board," I shall positively decline to act in the future. I want to see a change.

Another thing I want to suggest. Too much money in the "treasury" is a temptation to lawsuits. I regard the Bee-Keepers' Union a temporary concern. When we have obtained from courts of repute a sufficient number of decisions to put bee-keeping on even grounds with other pursuits, each bee-keeper must then do his own "lawing." I have practiced the profession of the law, and know whereof I affirm. There is a specific stage of civilization that leads men to resort to the law as a mode of warfare against their enemies. No "union" should encourage that sort of civilization. This world—not this country alone—is becoming full of "unions" and "trusts," and "combines," and "societies," of every earthly description, and there is a cataclysm ahead! or the "watchers" of the "signs of our times" are mightily mistaken.

Christiansburg, Ky.

[Right in line with the foregoing suggestions by Mr. Demaree, comes the following:—EDITOR.]

Officers of the National Bee-Keepers' Union.

BY FRANK BENTON.

Heretofore, when voting for officers of the Union, I have felt myself quite in the dark, as no candidates had been named, and even in some instances I did not have a list of the members of the Union from which to choose. Thus, however excellent a man might be named in my ballot, it is very possible the vote would be thrown out because the man was not a member of the Union, or it might be lost, practically, simply because no one else, or but few others, happened to choose the same candidate.

Believing that many other members have also found themselves in the same dilemma, I propose to present the names of a few of those for whom I would be willing to vote, and at the same time suggest that other members who see a possibility of improving the nominations by the substitution of other names, or the naming of an entirely distinct ticket, should send on their nominations at once, so they will appear before the voting-time closes.—Jan. 31.

We want men who occupy no equivocal position on the question of honey-adulteration, in whatever form that evil of

our industry appears, and also such as are thoroughly identified with the apian interests of the United States. While feeling certain that there are, among the members of the Union, many who would come up to this standard, and who at the same time possess such a knowledge of business methods and of the law as would also be of use to the Union, one is obliged to restrict himself to seven names. I give, therefore, the following:

For President—Hon. R. L. Taylor, of Michigan.

For Vice-Presidents—P. H. Elwood, of New York; Eugene Secor, of Iowa; Chas. F. Muth, of Ohio; C. P. Dadant, of Illinois; and G. W. Brodbeck, of California.

For Secretary and General Manager—Thomas G. Newman, of Illinois.
Washington, D. C.



More Kinks—Fumigating-Torches, Etc.

BY F. L. THOMPSON.

I am about to commit a most heinous sin—recommend an article I have not tried. My excuse is, I may never have the opportunity, as we are not troubled with moths here, to speak of. Some manufacturing chemists make what they call "sulphur torches"—one-pound cylinders of brimstone, about two inches in diameter, molded like a candle, and furnished with a wick. They cost 25 cents each, and are accompanied by a fire-proof box. They are said to burn twelve hours without attention, and leave no residue. I presume they put something in the sulphur to make it burn readily. This should be something for the supply dealers to get hold of, and handle among their many other conveniences for the bee-keeper.

SOMETHING ABOUT TIN CANS FOR HONEY.

It is commonly said that the 60-pound square can is the package for extracted honey. For shipping purposes it is, and when very small ants are troublesome; but for all other purposes I have found the 72-pound six-gallon round can (commonly known as "the 50-pound lard can") away ahead. This can is entirely open at the top, with a cover. It costs about 30 cents new, but I get all mine second-hand at a bakery for 10 cents each. It is less trouble to run honey in, and get it out; and for the scientific liquefying of granulated honey, there is no comparison between the two cans. A neighbor bee-keeper, Mr. Frank Rauchfuss, says that by punching two holes, at the same distance from each other, and from the sides of the vessel, clear down to the bottom of the granulated honey, it melts much sooner, and does not have to remain long on the stove; even a low heat, when long continued, being liable to color it. I would suggest a butter-tester as the neatest tool for the purpose, but a clean broom-stick would do.

BOILING HONEY TO LIQUIFY IT.

Apropos of this, I must criticise Mrs. Atchley for saying, on page 557 of the Bee Journal for Nov. 1, 1894, in reply to a questioner, "I am of the opinion you boiled your honey too much;" though the instructions she goes on to give are unexceptionable. But by expressing it that way, it might be implied, first, that the honey itself could be boiled a little without injury, which I don't believe; second, that the water surrounding it could be allowed to boil, which I don't believe either, as I colored some honey, though the honey-can was placed in a double water-can, and only the outer layer of water boiled. Since then, I have used a thermometer, and never let the water adjoining the honey get much over 140°, and had no trouble.

WAX-RENDERING IN IRON VESSELS.

And while I am making criticisms, I will refer to the instructions of Dr. J. P. H. Brown, on page 400, for rendering wax. He says: "A large iron pot, water and a bag properly worked, are the best for the business. The wax comes out

bright and yellow." Now, I always understood that iron vessels darkened wax. I have darkened some myself, in fact, by using a pan which had the tin worn off. How is it about that? It may be that pure iron has no effect, and that oxide of iron (rust) does the business; but if so, the statement has not been made before.

THE ROUND CANS FOR HONEY, ETC.

To return to the subject: The six-gallon round can has the additional advantage that it can be used for other purposes around the apiary besides holding extracted honey. When transferring, or cleaning off brace-combs out-of-doors, it is just the thing to dump odds and ends of comb into; it can be covered up in an instant from robbers, and afterwards the broken honey or wax disposed of at leisure. A 10-cent can is cheaper than a special wash-boiler for rendering wax. They make good receptacles for cappings, too. Instead of having a special funnel made, as directed in Doolittle's "Scientific Queen-Rearing," bees can be shaken off into one of these cans, and "boxed up" for a few hours until they "mourn," at one operation, in which case it might be well to punch some small holes in the cover.

For the temporary reception of sections, these cans are sometimes handy, always being bee-proof; each one holds 30 sections. Two of them setting permanently in the center of the apiary, one holding planer shavings, and the other the smoker, matches, oil-can and chisel, are a great convenience, as they are rain-proof. And, finally, a pair of shears converts them into those various tin strips not infrequently used by the bee-keeper.

I can also commend the article to Rambler as worthy of introduction among California bee-keepers. Many a fine young fellow has been worried into wedlock by fancied inconveniences, only to find when too late that in that respect he has jumped from the frying pan into the fire. When the tired bachelor enters his cabin at night, and steers straight for the easy-chair, or its equivalent, he is apt to stumble over piles of things which on previous occasions he had "chucked" out of the way, which piles, moreover, have an inconvenient tendency to accumulate at the bottom those articles oftenest used. This is a little wearing, of course (though not as much so as some have made out), but can be entirely obviated by some sort of distributing apparatus to receive the "chucked" articles, such as a generous quantity of shelves on each side of the room, and six or eight of the cans referred to, for the eatables, and dirty dishes which will be washed "next time." Mice will soon be starved out. Then what a bore it is to hunt out Sunday clothes in a double-decker trunk! A few of those cans will hold them just as well, and specialize them besides.

THE PENT-UP WRATH ESCAPES!

I have been nursing my wrath against Dr. Peiro for a long time, and can wait no longer, but propose to pitch into him apropos of nothing. Was it a mistaken idea of chivalry, or professional urbanity, or what, that made him say on page 172 of the Bee Journal for Aug. 9, 1894, *ladies* should do so and so, and *men* do something else? Would he have said gentlemen and women? It made me as mad as to see a notice of a "grand" free lunch, or to be asked to buy a "nobby" article.

Don't let it happen again, Doctor. But those little articles of yours are "daisies."
Arvada, Colo.



The Mission of Birds and Bees in the Orchard and Garden.

Read before the Iowa State Horticultural Society, Dec. 13, 1894,

BY HON. EUGENE SECOR.

Did you see that house-wren fly to her nest in the woodshed with a worm in her mouth? That's the twelfth time she has done the same thing in the last hour.

"How many babies has she, and what is the capacity of their unregenerated appetites for these dainty morsels of vegetarian nastiness?"

Well, ordinarily she hasn't more than six or seven infants at a time to feed, but it takes a good many worms to make a pound of bird-meat, to say nothing of the feathers which are probably more expensive than the birdling itself; and as this seems to be their exclusive diet during their babyhood, a moderate estimate of the daily consumption of worms in a bird family of usual numbers and average appetite is several hundred. And as she generally rears two broods in a season, who can estimate the value of even one pair of these little chatter-boxes?

And what a cheerful song they give us! They are the sure harbingers of spring. Their sprightly movements and cheery notes assure us that the winter of our discontent is past. They bid us enter upon the summer campaign with joy and hope. The confidence with which they come to our homes and claim our protection gives them at once the right of way to the best quarters we can furnish, and makes us better men and women by reason of their association. So insignificant in size, and sober in color, they seem to have almost escaped the vengeance of the small boy, and the rapacity of the grown-up barbarian. They make friends of every one they meet because of their cheerful disposition, good habits, and the absence of all bad qualities. They come as near being perfect in the eyes of the practical gardener and fruit-grower as any bird that visits our Northern climate. It is hardly necessary to intercede in their behalf, or to suggest that a safe nesting-place be provided away from the wily old cat.

And there's that pair of robins with their nest in the old apple-tree. About the first thing heard in the morning is the call to duty by these early risers after the proverbial worm. Before the peep of day they grow restless from hunger, or habit, or the pleading uneasiness of the baby squabs that have gone without a morsel to eat for one-third a calendar day. It is a race of the earliest and the swiftest for the unlucky vermicule that has allowed its appetite to get the better of its judgment, and has neglected to retire to a safe retreat before the early dawn. And its name is legion. But thanks to the young nestling with its mouth always open and its assimilating powers seldom overtaxed, the hordes of creeping, crawling and flying foes that prey upon the vegetable kingdom are held somewhat in check.

The birds named are only two out of a large number that wholly or in part live upon the enemies of the orchardist, the gardener and farmer. Does any one doubt the helpfulness of birds in holding in check the swarms of destructive insects, worms and bugs that harrass us? They would soon overrun the country like an Egyptian plague but for these friends of ours, ever vigilant because always hungry.

What if they do occasionally levy a slight tribute on our ripe berries? Can we dispense with their services? And think of their almost endless woody concerts! What compensation is adequate to such unparalleled variety and melody, that, like the blessed sunshine, falls upon the poor and rich alike? Shakespeare said—

"The man that hath no music in himself,
Nor is not moved with concord of sweet sounds,
Is fit for treasons, stratagems and spoils."

And he that hath no music in his soul for the songs of birds, and no appreciation of the poetry of bird-life, but who can wantonly slaughter these migratory, heaven-sent, operative bands, ought to be banished to the farthest coast of Nova Zembla until the heavenly melody of God's sweet songsters could penetrate his callous heart.

The crime of destroying our song-birds, or any others, for the purpose of supplying the demands of fashion ought never to be condoned. Their blood, like the blood of Abel, ought to cry out from the ground against such sacrilege. Or, like Banquo's ghost, they ought to haunt their slayers and users "to the last syllable of recorded time." If the butterflies of fashion ever want the ballot, they must first compel the men to respect their attire as well as their person and attainments.

* * * * *

The usefulness of bees in the economy of nature is too well known to need any special pleadings from me.

The natural inference to be drawn from their well-known habits establishes the theory that the chief purpose of their existence is the pollination of flowers. The collection and storing of nectar is secondary. Every observing person who has given attention to the matter has noticed that bees visit only one species of plants at a time. They do not go promiscuously from one kind to another. If they are working on apple-blossoms they stick to apple-blossoms so long as there is anything to be gotten from them. They do not go from apple

to plum, from raspberry to clover, from dandelion to willow. So averse are they to change that they frequently continue on a certain kind after it ceases to be profitable for honey.

One reason for this, it may be, is that they do not like to mix their honeys, but I do not think that the chief one, because I find cells partly filled with the finest honey in the world—clover or linden—completed with a dark-colored product from buckwheat or other fall flowers. But it is an evidence to me that they were created to pollinize flowers, and that they work along lines made for them by Superior Wisdom.

Charles Darwin proved by years of painstaking experimentation that plants grown from seed produced by the union of distantly related plants of the same species were more vigorous than those fertilized by their own pollen-dust, or by that from plants near at hand and grown under the same conditions as to soil and treatment. His deductions were that close in-and-in breeding tended to lack of vigor and inferiority.

This, then, is the mission of the bees: To carry the pollen-dust from one flower to another, and the small amount of nectar found usually in each individual blossom often compels them to fly quite a distance before securing a load, and hence plants widely separated are married by the bees. Another fact quite well established is that the pollen from a distant relative is prepotent. So the bees are continually crossing one variety of a species on another. And probably all, or nearly all, of the American fruits which we know and prize are the result of these chance crosses. While man with his puny camel's-hair brush is making feeble effort to breed fruits according to a theory—perhaps a hundred miles apart—these tireless little marriage-priests are accomplishing a much greater work, unheralded, unknown and unappreciated. Where we by our scientific methods evolve one new variety, they, by a method older than science or civilization, create hundreds.

What does our brush and pincers and paper-sack amount to, compared with God's cross-fertilizers?

I know it is maintained that bees are not necessary to a crop of fruit; and the facts are cited that we had fruit in this country before we had bees. I concede all this. There are other ways of carrying pollen than on insect legs and bodies.

Nature does not put all her eggs in one basket. She is lavish in her provisions for multiplying species. Look at the bushels of pollen that fall from evergreen forests—not a thousandth part of which is ever used. Look at the millions of particles of pollen-dust that go to waste in every cornfield.

That the wind plays an important part in transporting pollen-dust I have no doubt, but experience and observation have convinced me that the wind can be depended upon only within very limited distances. For example, in planting pistillate varieties of strawberries, it is necessary to intermix polliniferous plants quite liberally if we wish good crops. Now bees seldom work on strawberry blossoms. I think the wind is the chief agent in pollination. The same is also true in all the conifers and nut-bearing trees. But with most of our fruits bees are an active and beneficial agency in fertilizing the flowers. And with some varieties they are actually necessary, unless the trees are planted so close to some other sort which yields an abundance of pollen that they can be readily fertilized by the wind.

Mr. Darwin, in his "Cross and Self Fertilization," gives a list of plants, 65 species, that are either entirely or nearly sterile without insect aid. And, by the way, our white and red clovers are among them. Only kinds were experimented with that produced both stamens and pistils on the same plant, or, in other words, were perfectly adapted to self-fertilization so far as appearances went. Of course this number of species is only a fraction of the whole number, and constituted about half of the number experimented with. And is it not a fact that in all our hardy native fruits, almost without exception, there is a more abundant supply of pollen than in our imported or highly-organized sorts of the best quality? It must be remembered that all our improvements in the list of fruits are sports. And when we find a new thing of high flavor or attractive appearance, we propagate it whether it has all the hardy reproductive qualities of its ancestors or not. I have an opinion that all through nature *quality* is developed at the expense of vigor and productiveness. Civilization seems to be developing in that direction. Stock-breeders do not need to be told of the fact. Florists have so highly developed the rose that it has scarcely any pollen—and I am not sure but some kinds are so double they are entirely destitute.

If it be true, then, that the finer our fruits the smaller the quantity of pollen, and therefore the greater risk of pollination by atmospheric action, the more we shall need in the future *all* the agencies for fully and abundantly pollinizing them. One of the practical methods of accomplishing this is by the aid of the well-known honey-bees.—Forest City, Iowa.

our industry appears, and also such as are thoroughly identified with the apian interests of the United States. While feeling certain that there are, among the members of the Union, many who would come up to this standard, and who at the same time possess such a knowledge of business methods and of the law as would also be of use to the Union, one is obliged to restrict himself to seven names. I give, therefore, the following:

For President—Hon. R. L. Taylor, of Michigan.

For Vice-Presidents—P. H. Elwood, of New York; Eugene Secor, of Iowa; Chas. F. Muth, of Ohio; C. P. Dadant, of Illinois; and G. W. Brodbeck, of California.

For Secretary and General Manager—Thomas G. Newman, of Illinois.

Washington, D. C.



More Kinks—Fumigating-Torches, Etc.

BY F. L. THOMPSON.

I am about to commit a most heinous sin—recommend an article I have not tried. My excuse is, I may never have the opportunity, as we are not troubled with moths here, to speak of. Some manufacturing chemists make what they call "sulphur torches"—one-pound cylinders of brimstone, about two inches in diameter, molded like a candle, and furnished with a wick. They cost 25 cents each, and are accompanied by a fire-proof box. They are said to burn twelve hours without attention, and leave no residue. I presume they put something in the sulphur to make it burn readily. This should be something for the supply dealers to get hold of, and handle among their many other conveniences for the bee-keeper.

SOMETHING ABOUT TIN CANS FOR HONEY.

It is commonly said that the 60-pound square can is the package for extracted honey. For shipping purposes it is, and when very small ants are troublesome; but for all other purposes I have found the 72-pound six-gallon round can (commonly known as "the 50-pound lard can") away ahead. This can is entirely open at the top, with a cover. It costs about 30 cents new, but I get all mine second-hand at a bakery for 10 cents each. It is less trouble to run honey in, and get it out; and for the scientific liquefying of granulated honey, there is no comparison between the two cans. A neighbor bee-keeper, Mr. Frank Rauchfuss, says that by punching two holes, at the same distance from each other, and from the sides of the vessel, clear down to the bottom of the granulated honey, it melts much sooner, and does not have to remain long on the stove; even a low heat, when long continued, being liable to color it. I would suggest a butter-tester as the neatest tool for the purpose, but a clean broom-stick would do.

BOILING HONEY TO LIQUIFY IT.

Apropos of this, I must criticize Mrs. Atchley for saying, on page 557 of the Bee Journal for Nov. 1, 1894, in reply to a questioner, "I am of the opinion you boiled your honey too much;" though the instructions she goes on to give are unexceptionable. But by expressing it that way, it might be implied, first, that the honey itself could be boiled a little without injury, which I don't believe; second, that the water surrounding it could be allowed to boil, which I don't believe either, as I colored some honey, though the honey-can was placed in a double water-can, and only the outer layer of water boiled. Since then, I have used a thermometer, and never let the water adjoining the honey get much over 140°, and had no trouble.

WAX-RENDERING IN IRON VESSELS.

And while I am making criticisms, I will refer to the instructions of Dr. J. P. H. Brown, on page 400, for rendering wax. He says: "A large iron pot, water and a bag properly worked, are the best for the business. The wax comes out

bright and yellow." Now, I always understood that iron vessels darkened wax. I have darkened some myself, in fact, by using a pan which had the tin worn off. How is it about that? It may be that pure iron has no effect, and that oxide of iron (rust) does the business; but if so, the statement has not been made before.

THE ROUND CANS FOR HONEY, ETC.

To return to the subject: The six-gallon round can has the additional advantage that it can be used for other purposes around the apiary besides holding extracted honey. When transferring, or cleaning off brace-combs out-of-doors, it is just the thing to dump odds and ends of comb into; it can be covered up in an instant from robbers, and afterwards the broken honey or wax disposed of at leisure. A 10-cent can is cheaper than a special wash-boiler for rendering wax. They make good receptacles for cappings, too. Instead of having a special funnel made, as directed in Doolittle's "Scientific Queen-Rearing," bees can be shaken off into one of these cans, and "boxed up" for a few hours until they "mourn," at one operation, in which case it might be well to punch some small holes in the cover.

For the temporary reception of sections, these cans are sometimes handy, always being bee-proof; each one holds 30 sections. Two of them setting permanently in the center of the apiary, one holding planer shavings, and the other the smoker, matches, oil-can and chisel, are a great convenience, as they are rain-proof. And, finally, a pair of shears converts them into those various tin strips not infrequently used by the bee-keeper.

I can also commend the article to Rambler as worthy of introduction among California bee-keepers. Many a fine young fellow has been worried into wedlock by fancied inconveniences, only to find when too late that in that respect he has jumped from the frying pan into the fire. When the tired bachelor enters his cabin at night, and steers straight for the easy-chair, or its equivalent, he is apt to stumble over piles of things which on previous occasions he had "chucked" out of the way, which piles, moreover, have an inconvenient tendency to accumulate at the bottom those articles oftenest used. This is a little wearing, of course (though not as much so as some have made out), but can be entirely obviated by some sort of distributing apparatus to receive the "chucked" articles, such as a generous quantity of shelves on each side of the room, and six or eight of the cans referred to, for the eatables, and dirty dishes which will be washed "next time." Mice will soon be starved out. Then what a bore it is to hunt out Sunday clothes in a double-decker trunk! A few of those cans will hold them just as well, and specialize them besides.

THE FENT-UP WRATH ESCAPES!

I have been nursing my wrath against Dr. Peiro for a long time, and can wait no longer, but propose to pitch into him apropos of nothing. Was it a mistaken idea of chivalry, or professional urbanity, or what, that made him say on page 172 of the Bee Journal for Aug. 9, 1894, *ladies* should do so and so, and *men* do something else? Would he have said gentlemen and women? It made me as mad as to see a notice of a "grand" free lunch, or to be asked to buy a "nobby" article.

Don't let it happen again, Doctor. But those little articles of yours are "daisies." Arvada, Colo.



The Mission of Birds and Bees in the Orchard and Garden.

Read before the Iowa State Horticultural Society, Dec. 13, 1894.

BY HON. EUGENE SECOR.

Did you see that house-wren fly to her nest in the woodshed with a worm in her mouth? That's the twelfth time she has done the same thing in the last hour.

"How many babies has she, and what is the capacity of their unregenerated appetites for these dainty morsels of vegetarian nastiness?"

Well, ordinarily she hasn't more than six or seven infants at a time to feed, but it takes a good many worms to make a pound of bird-meat, to say nothing of the feathers which are probably more expensive than the birdling itself; and as this seems to be their exclusive diet during their babyhood, a moderate estimate of the daily consumption of worms in a bird family of usual numbers and average appetite is several hundred. And as she generally rears two broods in a season, who can estimate the value of even one pair of these little chatter-boxes?

And what a cheerful song they give us! They are the sure harbingers of spring. Their sprightly movements and cheery notes assure us that the winter of our discontent is past. They bid us enter upon the summer campaign with joy and hope. The confidence with which they come to our homes and claim our protection gives them at once the right of way to the best quarters we can furnish, and makes us better men and women by reason of their association. So insignificant in size, and sober in color, they seem to have almost escaped the vengeance of the small boy, and the rapacity of the grown-up barbarian. They make friends of every one they meet because of their cheerful disposition, good habits, and the absence of all bad qualities. They come as near being perfect in the eyes of the practical gardener and fruit-grower as any bird that visits our Northern climate. It is hardly necessary to intercede in their behalf, or to suggest that a safe nesting-place be provided away from the wily old cat.

And there's that pair of robins with their nest in the old apple-tree. About the first thing heard in the morning is the call to duty by these early risers after the proverbial worm. Before the peep of day they grow restless from hunger, or habit, or the pleading uneasiness of the baby squabs that have gone without a morsel to eat for one-third a calendar day. It is a race of the earliest and the swiftest for the unlucky vermin that has allowed its appetite to get the better of its judgment, and has neglected to retire to a safe retreat before the early dawn. And its name is legion. But thanks to the young nestling with its mouth always open and its assimilating powers seldom overtaxed, the hordes of creeping, crawling and flying foes that prey upon the vegetable kingdom are held somewhat in check.

The birds named are only two out of a large number that wholly or in part live upon the enemies of the orchardist, the gardener and farmer. Does any one doubt the helpfulness of birds in holding in check the swarms of destructive insects, worms and bugs that harass us? They would soon overrun the country like an Egyptian plague but for these friends of ours, ever vigilant because always hungry.

What if they do occasionally levy a slight tribute on our ripe berries? Can we dispense with their services? And think of their almost endless woody concerts! What compensation is adequate to such unparalleled variety and melody, that, like the blessed sunshine, falls upon the poor and rich alike? Shakespeare said—

"The man that hath no music in himself,
Nor is not moved with concord of sweet sounds,
Is fit for treasons, stratagems and spoils."

And he that hath no music in his soul for the songs of birds, and no appreciation of the poetry of bird-life, but who can wantonly slaughter these migratory, heaven-sent, operatic bands, ought to be banished to the farthest coast of Nova Zembla until the heavenly melody of God's sweet songsters could penetrate his callous heart.

The crime of destroying our song-birds, or any others, for the purpose of supplying the demands of fashion ought never to be condoned. Their blood, like the blood of Abel, ought to cry out from the ground against such sacrilege. Or, like Banquo's ghost, they ought to haunt their slayers and users "to the last syllable of recorded time." If the butterflies of fashion ever want the ballot, they must first compel the men to respect their attire as well as their person and attainments.

The usefulness of bees in the economy of nature is too well known to need any special pleadings from me.

The natural inference to be drawn from their well-known habits establishes the theory that the chief purpose of their existence is the pollination of flowers. The collection and storing of nectar is secondary. Every observing person who has given attention to the matter has noticed that bees visit only one species of plants at a time. They do not go promiscuously from one kind to another. If they are working on apple-blossoms they stick to apple-blossoms so long as there is anything to be gotten from them. They do not go from apple

to plum, from raspberry to clover, from dandelion to willow. So averse are they to change that they frequently continue on a certain kind after it ceases to be profitable for honey.

One reason for this, it may be, is that they do not like to mix their honeys, but I do not think that the chief one, because I find cells partly filled with the finest honey in the world—clover or linden—completed with a dark-colored product from buckwheat or other fall flowers. But it is an evidence to me that they were created to pollenize flowers, and that they work along lines made for them by Superior Wisdom.

Charles Darwin proved by years of painstaking experimentation that plants grown from seed produced by the union of distantly related plants of the same species were more vigorous than those fertilized by their own pollen-dust, or by that from plants near at hand and grown under the same conditions as to soil and treatment. His deductions were that close in-and-in breeding tended to lack of vigor and inferiority.

This, then, is the mission of the bees: To carry the pollen-dust from one flower to another, and the small amount of nectar found usually in each individual blossom often compels them to fly quite a distance before securing a load, and hence plants widely separated are married by the bees. Another fact quite well established is that the pollen from a distant relative is prepotent. So the bees are continually crossing one variety of a species on another. And probably all, or nearly all, of the American fruits which we know and prize are the result of these chance crosses. While man with his puny camel's-hair brush is making feeble effort to breed fruits according to a theory—perhaps a hundred miles apart—these tireless little marriage-priests are accomplishing a much greater work, unheralded, unknown and unappreciated. Where we by our scientific methods evolve one new variety, they, by a method older than science or civilization, create hundreds.

What does our brush and pincers and paper-sack amount to, compared with God's cross-fertilizers?

I know it is maintained that bees are not necessary to a crop of fruit; and the facts are cited that we had fruit in this country before we had bees. I concede all this. There are other ways of carrying pollen than on insect legs and bodies.

Nature does not put all her eggs in one basket. She is lavish in her provisions for multiplying species. Look at the bushels of pollen that fall from evergreen forests—not a thousandth part of which is ever used. Look at the millions of particles of pollen-dust that go to waste in every cornfield.

That the wind plays an important part in transporting pollen-dust I have no doubt, but experience and observation have convinced me that the wind can be depended upon only within very limited distances. For example, in planting pistillate varieties of strawberries, it is necessary to intermix polliniferous plants quite liberally if we wish good crops. Now bees seldom work on strawberry blossoms. I think the wind is the chief agent in pollination. The same is also true in all the conifers and nut-bearing trees. But with most of our fruits bees are an active and beneficial agency in fertilizing the flowers. And with some varieties they are actually necessary, unless the trees are planted so close to some other sort which yields an abundance of pollen that they can be readily fertilized by the wind.

Mr. Darwin, in his "Cross and Self Fertilization," gives a list of plants, 65 species, that are either entirely or nearly sterile without insect aid. And, by the way, our white and red clovers are among them. Only kinds were experimented with that produced both stamens and pistils on the same plant, or, in other words, were perfectly adapted to self-fertilization so far as appearances went. Of course this number of species is only a fraction of the whole number, and constituted about half of the number experimented with. And is it not a fact that in all our hardy native fruits, almost without exception, there is a more abundant supply of pollen than in our imported or highly-organized sorts of the best quality? It must be remembered that all our improvements in the list of fruits are sports. And when we find a new thing of high flavor or attractive appearance, we propagate it whether it has all the hardy reproductive qualities of its ancestors or not. I have an opinion that all through nature *quality* is developed at the expense of vigor and productiveness. Civilization seems to be developing in that direction. Stock-breeders do not need to be told of the fact. Florists have so highly developed the rose that it has scarcely any pollen—and I am not sure but some kinds are so double they are entirely destitute.

If it be true, then, that the finer our fruits the smaller the quantity of pollen, and therefore the greater risk of pollination by atmospheric action, the more we shall need in the future all the agencies for fully and abundantly pollenizing them. One of the practical methods of accomplishing this is by the aid of the well-known honey-bees.—Forest City, Iowa.

The Sunny Southland.

CONDUCTED BY

MRS. JENNIE ATCHLEY, BEEVILLE, TEX.

A New Year's Greeting.

Dear friends, I wish to thank you for your many kind letters and kind words during 1894, and now, as the New Year dawns, I wish to greet you with a New Year's smile, and wish you all a Happy 1895, and trust you may all reap a good honey harvest this year.

We are very busy just now (Dec. 20), as our bee-meeting is almost at hand. But I feel that I *must* take time to thank one and all for your kindness to me in the past. It seems to me now that nearly all my time is taken up entertaining bee-keepers in some way, and I feel more and more attached to bee-people as the years roll by. I can pass time more pleasantly in company with bee-keepers than with others, and this is why I feel more attached to them.

I wish to make my department more entertaining this year than ever before, and ask the assistance of *all* my bee-friends in making "The Sunny Southland" what it ought to be. Now, that the "Old Reliable" is going to be greatly improved, I must also improve my department. Send in your questions, and all the good matter you can, and I will answer and discuss all bee-matters in this department.

Again I thank you, and wish all a prosperous 1895.

JENNIE ATCHLEY.

Bee-Keepers Arriving at Beeville.

This is Dec. 20, and the bee-keepers are beginning to arrive. Mr. C. B. Bankston and two sons, of Chriesman, Tex., came last evening; and F. A. Lockhart, of Lake George, N. Y., came this evening. All seem favorably impressed with Bee county. A full report of our bee-meeting will appear in my department soon after the meeting. We are having lovely weather, and bees are gathering honey from black chaparral, which is just now beginning to bloom.

JENNIE ATCHLEY.

Flowers from Australia—The Bee-Bulletin.

We have just received some flowers from Australia, sent by Mr. E. Tipper, editor of the Australian Bee-Bulletin. One is bloodwood, the other mahogam—both native Australian plants, and, I suppose, good honey-yielders.

By the way, have you noticed what an interesting journal the Australian Bee-Bulletin is? I tell you, I believe if we had our bee-meetings oftener, like they do in Australia, it would be helpful to us. The Australian Bee-Bulletin is a well-printed and well-gotten-up journal, and seems ever alive to the interest of its readers. It comes monthly, and has about 36 pages each issue. May it prosper, and be well patronized by the bee-keepers of Australia and other countries.

JENNIE ATCHLEY.

Those Bee-Lessons—Transferring Bees.

I will continue my lessons soon after our convention report is all published. Also, I have in store for you our visit to the bee-keepers of Brazoria county.

We are transferring bees this beautiful spring-like weather—Dec. 21—and some of our bees are rearing brood right lively. But we will put a stop to their brood-rearing as soon as a few young bees are hatching, as they would use up all their honey if left to do as they wished to do. We will

cage the queens if breeding does not stop, as we do not want bees at this time of the year. But unless we have some colder weather, our honey-bearing plants will be in full bloom, and then we will be ready to harvest the honey. Our bees, with few exceptions, are in fine condition for winter, and if we can keep down breeding, they will be all right.

JENNIE ATCHLEY.

The Bee-Bulletin Calls It "Meanness."

Do you keep bees? Then of course you take the American Bee Journal. The following I found in the Australian Bee-Bulletin:

"Oh, no, I always see it, though; Mr. So-and-So takes it, and he lets me look it over always." Such a conversation actually took place in one locality lately. One party was mean, and the other thoughtless. What show is there of improving a paper, or even of keeping it up to its present standard, with many such people?

Now, this is really too bad. I know it is your privilege to borrow your good neighbor's journal, as well as his other necessities, but all bee-keepers in the South who do not take the American Bee Journal already, just send to me your subscription for it, and I will promise you we will endeavor to please you, and make you feel well repaid for the dollar, and at the same time enable the "Old Reliable" to move out on the line of progress and improvement. During these long winter evenings, rake up items of news and bee-notes of interest, and send them to me, or to Editor York direct, and we will be glad to publish them. Remember, the "Old Reliable" is strictly a *bee*-journal!

JENNIE ATCHLEY.

Questions AND Answers.

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

When and How to Transfer Bees.

1. At what time during spring or summer would it be more suitable to transfer bees from the old-style box-gum into frame hives?
2. Can I transfer them in time to get a full crop of comb honey the first season?
3. In transferring, is it best to transfer a part, or all, of their brood-comb (from the old gum) into the frame hive, or simply give them comb foundation to start brood anew?

Reynoldsville, Ill.

C. H. S.

ANSWERS.—1. The time generally taken for transferring is fruit-bloom.

2. If done in good shape, it ought not to put the bees back, and, indeed, in some cases you may get a larger crop the same season than if you had not transferred them. For, as a general rule, in box-hives a good deal of drone-comb will be found, and an inch of drone-comb means a good deal more than an inch of honey lost.

3. As a rule, none but good, straight worker-comb is transferred, but no brood should be wasted.

Before doing much transferring, it will pay you to get a good text-book and read up.

The Standard Langstroth Frame.

What is the length of a standard Langstroth frame? I have 17 $\frac{1}{2}$ inches, according to "Langstroth on the Honey-Bee," before Dadant's revision, and as a hive has, that I got from Mr. Heddon 10 years ago, from which all mine have been made. The dovetailed hive, I believe, has frames 17 $\frac{1}{2}$ inches long. There cannot be two "standard" lengths of any

one thing. In Query 950, the answers, or most of them, say: "The standard Langstroth frame," as though there was only one length.

The reason I ask is, that next year I may get more hives, and as the dovetailed is the best way to make them, I should probably get them, but I do not want, and would not have, two sizes; but I want the standard, whichever it is. T. T.

ANSWER.—In the fullest sense, I suppose any movable frame is a Langstroth frame, as the principle is there. The original Langstroth frame was, however, 17 $\frac{1}{2}$ inches long. Then they were made 17 $\frac{1}{2}$ to accommodate the size of sections, and this size, which is sometimes called "Simplicity," and sometimes "Langstroth," I suppose, would really be called the standard size, as it is, I believe, the one in most general use.

Arranging a Bee-Shed for Winter.

Thinking to winter my bees to good advantage, I built last spring a shed, closed on the north, east and west sides; also on the south to within 3 or 4 feet of the ground. I can close it clear to the bottom in front, or the south side.

1. Will it be better to leave it open in front, with the hives well back, or had I better close it entirely when settled cold weather comes?

2. As I can arrange to pack between and back of the hives with straw, would it be advisable to do so?

Sharpeye, Ohio.

H. M. S.

ANSWERS.—1. I believe I would leave it as you have it, so that the sun may shine in when there comes a warm day.

2. I think it would be a good thing, so long as the packing does not interfere with the hive-entrances.

Feeding in Winter—Transferring, Etc.

1. How can bees be fed in box-hives at this time of the year?

2. Can bees winter with only a few bees on the combs now, and no honey in the hive, if they are fed?

3. Is it better to transfer bees from box-hives to frame ones now, or wait till spring?

4. Can all worker-bees lay eggs? Do they lay worker or drone eggs?

5. Does the queen lay all the eggs?

We have had a very poor year for honey. The bees gathered some early in the spring, but none since. They are starving to death in this country. I have a few colonies in box-hives. They are very weak, and have no stores. I would like to carry them through the winter. Please give me the best advice you can on the matter.

Buckeye, La.

J. T. S.

ANSWERS.—Although you don't say so, I suspect that you want your answers in the American Bee Journal. I heartily wish that each one asking questions and desiring answers in

this journal would say so, as I can't tell whether you may not be a reader of another paper to which I send replies.

1. It depends a little on circumstances, what may be the best way. If the weather is warm enough, all that is necessary is to put some honey or some sugar-candy under the bees and they will take it up. But the candy will not work so well under the bees as honey, for it may be too dry. It isn't well to feed syrup in winter. If it's too cold for the bees to come down to the bottom-board, then you can turn the hive upside down, lay the honey or the candy on the combs, and cover over so the weather can't trouble, but don't cover so close as to smother the bees. The first warm spell that comes, you can turn the hive right side up.

2. I wouldn't give much for their chances, and I would not give much for the outfit if they should pull through.

3. Better wait till spring.

4. I don't know. The latest opinions rather tend toward the belief that when circumstances are right to develop laying-workers, that any worker may develop into a laying-worker.

5. In a colony that's all right, the queen lays all the eggs.

Perforated Zinc or Wire-Screen Separators.

Have you, or anybody else, used separators made of perforated zinc, or wire-screen, with meshes so big that the bees could go through? I have been thinking of trying some experiments in that direction, as I think there is some advantage in it; but I thought of it too late to try it this year. I will try it next season.

O. G. R.

Lake Mills, Iowa.

ANSWER.—Yes, some years ago they were heralded as a great improvement, and I believe were patented, but as they sunk out of sight I suppose there was no great merit in them. I commend your judgment in first asking about such things before going to any great expense. Thousands of different things have been tried, and it would be well for those who think they have some improvement to first ask whether it is anything new.

Basswood Division-Boards Warping.

I have some nice basswood lumber, half-inch thick, that I would like to make division-boards of for brood-chambers. Will it make good division-boards? or will it warp by the heat of the bees, or from any cause?

L. E. E.

Onsted, Mich.

ANSWER.—Basswood, or linden, is one of the worst woods to warp. But you can manage it in this way: Cut the division-boards an inch short, then nail on each end a strip half an inch wide. Indeed, I would have some kind of strips on the end, no matter what kind of wood is used.

Doctor's Hints

By DR. PEIRO, Chicago, Ill.

Not a Fool.

No, sir, Mr. Jones; you are in error to suppose that your boy lacks ordinary intelligence just because he has what you describe as "that far-away look." You don't know, and cannot imagine, what thoughts are going on in that brain of his. He may greatly surprise you some of these fine days by his original thoughts or works.

I more than half suspect, from your letter, that you have done him the great injustice of frequently expressing your conviction to him, that you consider your son little better than an idiot, until perhaps he

has almost become persuaded that your estimate of his intelligence is correct! Many a boy and girl have been mentally ruined by such heartless presumption. The fact that your son is not particularly interested in your farm work, and the various drudgeries it entails, is no evidence that he may not be intended by Nature for some vocation in life just as good or important as a farmer. Many a boy, reared on a farm, has become the greatest of useful citizens.

"Film" on the Eye.

Well, Mrs. Whitman, I wouldn't take so gloomy view of the case. A thick film on the eye, even in a person of your years, does not necessarily portend total loss of sight. A practical opinion must depend upon a thorough examination. But what you call a "film" on the eye may really be a thickening of the round center of the eye

—the cornea, doctors call it. I don't mean the little spot in the very center, but that part by which you decide the color of one's eyes. If it is thickened, perhaps little can be done, but it may be that only the thin membrane covering it is thickened, as the result of inflammation. In that case a cure is almost certain. So don't give up.

Use a lotion made of 20 grains of boracic acid and three ounces of camphor water—a few drops put into each eye five or six times a day. It doesn't pain. It will do no harm if the case is of the hopeless kind, and is pretty certain to make you well if it is of the nature last considered. Try it, anyway.

A B C of Bee-Culture—just see the magnificent offers on page 15. Every one of our subscribers can now have a copy of that splendid book

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IN AMERICA

THE AMERICAN BEE JOURNAL

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"GLENER"	- - -	"AMONG THE BEE-PAPERS."
"BEE-MASTER"	- - -	"CANADIAN BEEDOM."
DR. F. L. PEIRO	- - -	"DOCTOR'S HINTS."

Vol. XXXV. CHICAGO, ILL., JAN. 3, 1895. No. 1.

Editorial Comments.

Now for 1895.—The brand new year is begun. The old American Bee Journal has donned its new-style suit of clothes, and again wishes you "A Happy New Year!" It comes to you as a silent friend, yet would speak to you in words that help, cheer and encourage. It desires to express the hope that the New Year may bring to all its readers sweet peace and honied plenty. That though storms may assail, and drouths destroy, yet there's nothing to be gained in gloomy forebodings and depressed imaginings. Cheer up, then! Let all be determined to make 1895 the best year of their lives. Let it be understood that, come what will, bee-keepers will bravely press onward, and *deserve* success, whether it be theirs or not.

Among the Bee-Papers, on the opposite page, is a new department, in charge of one who is styled "Gleaner." It will be "Gleaner's" aim to "boil down" the other bee-papers, and crowd into that department all their newest and most valuable ideas. In fact, "Among the Bee-Papers" will save you a heap of time, as "Gleaner" will read *all* the other papers, and present to you, week by week, the rich, thick "cream" which results from careful "skimming." Keep your eye on "Gleaner," and see what a good "skimmer" can do.

The 35th Year of the American Bee Journal begins with this number. It is just a trifle older than its editor. Few periodicals can say that. But while age does not always carry with it strength, nor youth at all times indicate vigor, still I trust that the American Bee Journal may from year to year become stronger and more vigorous in its ability to furnish unexcelled weekly apicultural information to its readers, both near and "in earth's remotest bounds."

I desire to sincerely thank all who have so kindly aided me by their apiarian contributions, and by kind and encouraging words and help, since I have endeavored to guide the "Old Reliable" ship—now a little over two and a half years. I trust that my past mistakes may be overlooked, and that in the future I may be enabled to avoid the rocks that at times I have struck upon while trying to navigate beedom's channel of progress.

With new sails unfurled to the clear breezes of 1895; with stronger editorial hands upon the helm; and with a firmer determination than ever to "go forward," the old American Bee Journal ship invites everybody to "get aboard" for another twelve-month voyage.

Not a Bit Discouraged.—In a letter received from Mr. B. Taylor, of Forestville, Minn., dated Dec. 17, I read these words:

Bee-keeping was never in such a low condition here as now, but it will boom again in time. I shall stick to the bees with greater zeal than ever. I am having the happiest experience of my life now in my 66th year.

Your friend,

B. TAYLOR.

There is something very refreshing in the above. The right kind of stick-to-ativeness is exhibited. The people who are jumping from one thing to another are the ones that never succeed. I am glad Mr. Taylor is leading off in the right way. Though in his 66th year, he's more determined than ever to make a success of bee-keeping. He's happy about it, too. And he will win! His name is B(ee) Taylor.

Mr. T. promises to send in his report soon for the past year.

Canadian Beedom, which is begun in this issue of the American Bee Journal, is mainly intended, as its name indicates, for readers living in Canada. But if any other folks fail to read "Bee-Master's" department, it will not be his fault that they miss something helpful and instructive. Canadian readers are invited to contribute their apiarian "mites" or "kinks" to the new department, and to help make it superior in quality to their wonderful basswood (no—*linden*) honey—if such a thing be possible.

Why not have a little innocent rivalry between the departments conducted by Mrs. Atchley and "Bee-Master?" They are far enough apart to be equally fair, and so that no destructive collision could well occur. Besides, I'll see that no harm results. Now for the rivalry of apicultural intelligence!

The Production of Extracted Honey will be explained in detail by Mr. Chas. Dadant, in a series of articles, the first of which is published in this week's Bee Journal. Mr. Dadant has no superior as a producer of extracted honey, he and his son (C. P.) having harvested over 40,000 pounds in a single season. I want to invite a careful reading of Mr. D.'s extracted honey articles, particularly by new subscribers, as no mistakes will be made if they follow implicitly Mr. Dadant's directions, which are the result of several decades of practical experience with bees.

Other articles of the series will follow at intervals of at least each alternate week, until completed.

Paste for Sticking Labels on Tin.—In the January number of Demorest's Family Magazine are given a number of recipes for making various kinds of cements or pastes. Among them I find the following, which are recommended for fastening labels on tin—something that bee-keepers need when they come to labeling their tin receptacles for honey:

No. 1.—Soften glue in water, then boil it with strong vinegar, and add sufficient flour to make a paste.

No. 2.—Four ounces of rye flour, $\frac{1}{2}$ ounce of alum, and 8 ounces of water. Mix into a smooth paste, and add a pint of boiling water. Cook until thick, then add one ounce of glycerine and 30 drops of oil of cloves.

Comb Honey Production will be treated of in a series of articles beginning with next week's Bee Journal, by Rev. R. T. Abbott, of St. Joseph, Mo., ex-President of the North American Bee-Keepers' Association. It is intended to alternate these articles with those on extracted honey production by Mr. Chas. Dadant, referred to in another paragraph. It will well repay every reader of the American Bee Journal to preserve all the articles by Messrs. Dadant and Abbott, for future reference. These two series of articles alone will be worth many times the price of a year's subscription to the Bee Journal.

Mr. C. P. Dadant—whose picture, in connection with his father's, is found on the first page of this number of the American Bee Journal—is a man well known to the bee-fraternity, yet a few facts concerning his life I am pleased to give here, as I know they will be read with much interest by all:

Camille P. Dadant was born April 4, 1851, at Langres, France. He is therefore about 44 years of age. At the age of 12 he emigrated to this country with his parents, and has ever since lived on the homestead in Hamilton, Ill., which they occupy at present.

In 1874 his father took C. P. into partnership with him, and he

has since that time been the business manager of the firm. He was married in 1875, and now has a family of six children—three boys and three girls—the oldest of which is 18 years of age, and the youngest four.

He took an active part in the revision of the book of Langstroth, which occupied his father's time for three consecutive winters. In addition to the management of their foundation factory and supply business, he overlooks the care of five apiaries, and superintends a large vineyard and a wine-cellar, making the wine after the manner of their old home in France, which was situated on the confines of Champagne and Burgundy.

Mr. Dadant, junior, is intimately connected with the growth and prosperity of the little town of Hamilton, near the outskirts of which they live. He is one of the founders of their Loan and Building Association, and has been one of the Directors of that Association since its beginning. He is also Vice-President of the State Bank, in the same town. The town has a bright outlook for the future, being situated on the Des Moines rapids of the Mississippi river, which are shortly expected to be used as a water-power of colossal dimensions.

I gave an old picture and short biographical sketch of C. P.'s father—Mr. Chas. Dadant—in these columns in 1893. The two engravings shown on the first page, were made from photographs taken last month, and especially for use in this number, at my request.

Rev. E. T. Abbott, ex-President of the North American, is in great demand now-a-days in his own beloved Missouri. After having lectured at farmers' institutes for several weeks the past fall, Secretary Rippey, of the State Board of Agriculture, has invited Mr. Abbott to also deliver a series of lectures soon on Apiculture, before the class in Agriculture in the State University at Columbia. This will be a good thing for bee-keeping in Missouri, and all over the country, as well, as it will no doubt attract the attention of the boards of agriculture in neighboring States, and lead them to do the same thing.

Missouri bee-keepers are fortunate in having so good a friend on their State Board as Mr. Rippey. He has also asked Mr. Abbott to prepare a condensed report of the North American convention held at St. Joseph, to be used in the next Report issued by the State Board of Agriculture. Some of the essays read at the convention will appear in full. In fact, Mr. Rippey has left it to Mr. Abbott to say what is best to be included, and that means that a good report of the North American will be furnished him. It will help the bee-keepers of Missouri to have it published in connection with the Board of Agriculture Report.

Two Copies of this Number of the American Bee Journal may be received by a very few of its regular subscribers. If so, it is a mistake, and I trust that should any one receive two copies, he or she will be kind enough to hand the extra copy to some bee-keeping friend. Possibly in many cases a new subscriber may thus be secured. An edition of 10,000 copies of this number is printed, in order to have some extra copies for use as samples. Any desiring such for use in trying to get new subscribers, will be gladly supplied if they will simply send in their requests. All subscriptions for some time will begin with this number, so that each subscriber will have a complete volume from Jan. 1, 1895 to Jan. 1, 1896. The index will be printed in the last, or 52nd, number of the year.

Among the Bee-Papers

Conducted by "GLENER."

FEEDING IN SPRING.

Wm. McEvoy, in the Canadian Bee Journal, advises against *early* spring feeding, while strongly favoring later feeding under certain conditions. He says:

"The stimulating of my colonies by feeding them in *early* spring broke the cluster, excited the bees and caused them to fly too much in unsuitable weather when there was nothing for them to gather. By that sort of work I weakened many a good colony and then learned by experience to let all colonies carefully alone in spring until the bees began gathering honey from the willows, wild plum and other early honey-producing trees."

After that time he favors uncapping the sealed honey, especially when a time comes that on account of bad weather or lack of forage the bees are bringing nothing in. At such times, with plenty of sealed stores in the hive, the larvae will be partially starved if no *unsealed* stores are present, and the

hatching bees will wander over the combs not finding enough to eat.

THAT NORTH AMERICAN REPORT.

The long-drawn-out report of the St. Joseph convention begins to have holes in it as if some parts had dropped out. For example, Dr. Peiro says, "Mr. Richardson tells me something that is entirely new to me;" but on looking back, one cannot find what was said. Mr. Holterman says, "What I said, I said in a sort of joking way;" but you can't turn back and find the joke. Has that report gone through so many hands that some pieces have been lost, or has it hung fire so long that some of the writing has faded out? Possibly it might be a good plan for the "Old Reliable" to return to its usual way and publish its own report.

CONTROVERSY ON FIVE-BANDED BEES.

A lively skirmish is taking place in the Progressive Bee-Keeper over these undoubtedly beautiful insects. Chief disputants, Jennie Atchley and Editor Quigley. The latter backed by S. E. Miller, who says: "For the last three or four years, the glory of the golden five-banded Italian bees has been rising up the eastern horizon. It has now passed its zenith, and is fast sinking low in the west."

Bro. Quigley says yellow queens and bees can't be produced from imported stock. Mrs. A. doesn't agree. She says, "I have reports on the five-banded bees this year that would knock out all other bees." He says, "These testimonials are given in a short time after the queens are received, and not one in 20 has any bearing on honey-gathering qualities of the bees." Mrs. A. says the five-banded, like other bees, have their faults, but asks that Satan be given his dues. To this Bro. Q. replies, "The devil seems to be O. K."—an endorsement the latter gentleman doesn't always get. Wonder if they are talking about the same thing, after all. Because a man with yellow hair stole a horse, it doesn't follow that all golden-haired men are horse-thieves.

ESSAYS AT BEE-CONVENTIONS.

There seems to be quite a little stir lately about the matter. Several have objected particularly to long essays, the ground being taken that essays should only be used to introduce discussions. But no less a person than President Abbott has come to the rescue, and in Gleanings he defends the essays on the ground that they serve as an advertisement, for the daily papers will print them and will not print the discussions. And now I suppose some of those objectors will be just unreasonable enough to arise and ask how much more money was sold in St. Joseph because of the publication of an essay on bee-keeping in France, in the papers of that pleasant city.

PHILOSOPHY OF PERCOLATING FEEDERS.

Dr. Miller, in Gleanings, philosophizes upon some experiments he has been making, and seems rather to come to the conclusion that after all percolating is not the essential part of the percolators. According to his reasoning, anything will answer that will hold the water long enough to dissolve the sugar, and at the same time will allow the syrup to escape only at the bottom. In that way the heaviest part of the syrup will always be going to the bottom, while the thinner and lighter portion remains at the top, dissolving its share of the sugar as it slowly sinks to the bottom.

IMPROVEMENT IN HIVE-COVERS.

Of late, flat covers have been quite popular with a good many bee-keepers. They are lighter and cheaper than others, but have the bad habit of warping and twisting, no matter how tightly clamped at the ends. The "Higginsville cover," gotten up by the Leahy Manufacturing Co., is quite an improvement. Being made of two pieces with a ridge board they are comparatively free from twist, and being thinned down at the edges they are more easily held from curling up.

Canadian Beedom.

Conducted by "BEE-MASTER."

Salutatory.

The title of this department, and the nom-de-plume of its conductor, must be regarded as Editor York's introduction of the writer to his readers. Neither the title nor the nom-de-plume are of my choosing, and being a modest man, I rather shrink from the title of "Bee-Master," lest it should imply any assumption of authority. I was quite in favor of "Apiologist," signifying a "student of bees," which I certainly have been for many years, and expect to be until I shuffle off this mortal coil. However, Mr. York thought that name stiff, scientific and pedantic, so I willingly dropped it. When "Bee-Master" was proposed, I took kindly to it, because it is the title which in England means the same as bee-keeper does in this country—just as flock-master or sheep-master means one who keeps sheep. As I am a "bloomin' Hinglishman," perhaps it is just as well that I should take the name common to bee-men in my native land.

It may be added that Bee-Master keeps bees and lives in Canada.

"No further seek his merits to disclose,
Or draw his frailties from their dark abode."

Do not waste paper, ink and postage stamps in querying who he is, because, like the celebrated Junius, he is determined to preserve his *incog.*, and to elude detection. As that greatest of anonymous writers said: "I am the sole depository of my secret, and it shall perish with me." So it has. To this day, no one knows who was the author of the celebrated letters of Junius.

Canadian beedom, geographically speaking, includes a pretty big territory. We, in this country, are fond of chuckling that it is bigger than the whole of the United States, with Alaska thrown in. But, actually and practically, it is only a small portion of this vast domain in which bees can be kept to advantage. A comparatively narrow strip or belt stretching from the Atlantic to the Pacific might be defined as that portion of the Dominion which really constitutes Canadian Beedom. But that strip or belt has no superior as a honey-field anywhere in "the wide, wide world." The slopes of Mount Hymettus, the heather hills of Scotland, the glades of the "Sunny South," and the expanses of California, fall to present a richer and better honey-field than that possessed by Canadian bee-keepers. A few persons educated from childhood to its peculiar taste, prefer the heather honey of Scotland to the best Canadian product, just as a Dutchman, with peculiarly educated palate, prefers sour-kraut and Limberger cheese to sweet cabbage and the best Stilton; but impartial judges have time and again pronounced our A 1 honey equal to any, and surpassed by none. The claim has been set up that our honey is the best on earth; that our linden is better than American basswood; and that we can beat all creation in this line. Bee-Master washes his hands of all this extravagant boasting, and sets it down to that peculiarity of human nature which makes a man think his wife is the best in the world, or a mother suppose that her children surpass all others. It is glory enough for Canada to be the peer of the United States in the matter of honey-production. If we can run a neck and neck race with our American cousins, we shall do pretty well. Bee-Master will strive to promote a friendly rivalry, while maintaining, to the utmost, international amity and good-will.

It only remains to be said further at the present time, that this department is to be considered as open to Canadian correspondents, and they are specially invited to contribute to

it their very best ideas, in order to make Canadian Beedom all that its name implies.

Communications for this department must be addressed to the office of the American Bee Journal, 56 Fifth Ave., Chicago, Ill.

The Next North American Convention.

Mr. McKnight has a brief article in *Gleanings* for Dec. 1, in regard to the next meeting of the North American Bee-Keepers' Association, expressing his pleasure that the meeting is to be held in Toronto, and setting forth inducements to a large attendance. In thus writing, Mr. McKnight has voiced the sentiments of Canadian Beedom. Though some are still rather sore over what they think our practical exclusion from all membership, in consequence of the incorporation of the Association, that will not abate the warmth or sincerity of our welcome to our American cousins. We are well aware that the legal change in the Constitution was the work of a very few individuals, and that it was part of a centralization scheme which did not materialize. We know also that the great majority of American bee-keepers feel as warmly as ever toward their northern neighbors. We propose, therefore, to give the Association a cordial welcome—to receive its members, as it were, with open arms and open hearts. Come one, come all, and try to make yourselves at home if it is a "furrin' land," monarchy-curst, and under petticoat government.

Mr. McKnight suggests that the meeting be held during the Industrial Fair, when extremely low rates are made by the railroads. As an argument for this he mentions that one of the Fair days is known as "American Day." The only danger is that the attractions of the Fair might be too great to admit of a regular attendance at the meetings of the convention. This would be to some extent obviated if the Association were to meet on the Fair grounds, and were to hold a bee-keepers' conversazione, such as is often held in England, dispensing for once with the reading of formal essays.

I am quite sure that if the Directors are applied to in good time, they will cheerfully make arrangements for the convention to meet on the Fair grounds, where now there is ample accommodation. A large tent could be obtained for the occasion such as the one owned by the Ontario Agricultural College, which would be readily obtainable for such a purpose. It might be used as a hall by day and a dormitory at night, by providing a lot of stretchers. There will be plenty of provisions at hand, and the affair might be made a very enjoyable picnic.

A Few Brief Notes.

The annual meeting of the Ontario Bee-Keepers' Association will be held in the city of Stratford, on Jan. 22, 23 and 24, 1895. All bee-keepers are cordially invited to attend. Mr. W. Couse, of Streetsville, is the Secretary.

The December number of the Canadian Bee Journal contains a full-page engraving of The A. I. Root Company's establishment at Medina, Ohio; also an interesting account of a visit paid by Editor Holtermann to Messrs. C. F. Muth & Son, at Cincinnati.

Here in Canada, the free blooming of dandelions, and even white clover late in the fall have been unusual features of the season of 1894. Viper's-bugloss bloomed early and continued long. The golden-rod was a failure, owing to the prolonged drouth.

Mr. McEvoy states his system of caring for bees in spring in the December number of the Canadian Bee Journal. It is to keep everything snug until the bees begin gathering in

spring, then uncap the brood-frames gradually on warm evenings, put on the half-stories, and let the bees carry honey up from below. As room is thus made in the brood-chamber, the queen betakes herself to laying, so that soon there is an abundance of brood. If wet and unfavorable weather sets in, as it did last spring, the bees must be fed, or not enough honey will be taken from the sealed stores overhead to feed the young larvae sufficiently to keep them growing vigorously. Those who, like himself, fed their bees during the trying month of May last, were the ones who reaped the best honey harvest.

The Brant Bee-Keepers' Association met in the Court House at Brantford, Nov. 3, 1894. Owing to unfavorable weather, the attendance was small, but the proceedings did not lack interest. The subject of winter packing received most attention.

The Practical Bee-Keeper reports a meeting of the Leeds and Granville Association at Brockville, Oct. 9, 1894. The

President, Mr. M. B. Holmes, gave a retrospect of progress made in the past ten years, and said:

What a wonderful change has taken place! Then it was a box containing a chaotic mass of honey in the comb; now it is a dozen or so of one-pound sections nicely finished by the bees themselves. Then it was "Strained Honey," a compound of nectar of flowers, pollen, grains of wax, etc.; now extracted honey in an amber liquid fit to tempt the most fastidious taste. But that which is of most interest to the general public is this fact; that, because of modern improvements, honey has been so reduced in price that it is no longer a luxury seen only on the tables of the rich, but it is within the reach of all. And what do we see as a result? I think we may safely say that there is ten times as much honey consumed as there was ten years ago, and if the bee-keepers of this country do their whole duty, there is not a doubt that the consumption of honey will continue to increase at the same rate for the next ten years.

An address was read from Mr. Allen Pringle, on "Bee-Keeping in Ontario," for which we shall try to find room in the next issue of Canadian Beedom.

Convention Notices.

COLORADO.—The 15th annual meeting of the Colorado State Bee-Keepers' Association will be held on Monday and Tuesday, Jan. 21 and 22, 1895, in Denver. H. KNIGHT, Sec. Littleton, Colo.

NEW YORK.—The annual meeting of the Ontario Co., N. Y., Bee-Keepers' Association will be held in Canandaigua, N. Y., Jan. 25 and 26, 1895. Come early. Everyone come. Bellona, N. Y. RUTH E. TAYLOR, Sec.

ONTARIO, CANADA.—The annual meeting of the Ontario Bee-Keepers' Association will be held at Stratford, Jan. 22, 23 and 24, 1895. All bee-keepers are cordially invited to attend. W. COUSE, Sec. Streetsville, Ont.

MINNESOTA.—The regular semi-annual meeting of the Southern Minnesota Bee-Keepers' Association will be held on the first Monday in May, 1895, at LaCrescent, Minn. All bee-keepers invited. E. C. CORNWELL, Sec. Winona, Minn.

PENNSYLVANIA.—The Venango County Bee-Keepers' Association of northwestern Pennsylvania will hold their 2nd annual meeting in the City Hall at Franklin, Pa., on Jan. 28, 1895, at 1 o'clock p.m. All interested send for program. C. S. PIZER, Sec. Franklin, Pa.

WISCONSIN.—The 11th annual meeting of the Wisconsin State Bee-Keepers' Association will be held in the Capitol, at Madison, Feb. 6 and 7, 1895. All bee-keepers are requested to attend, whether they receive a formal notice or not. H. LATHROP, Rec. Sec. Browntown, Wis.

KANSAS.—There will be a meeting of the Southeastern Kansas Bee-Keepers' Association on March 16, 1895, at Goodno's Hall, in Bronson, Bourbon Co., Kans. It is the annual meeting, and all members are requested to be present, and all bee-keepers are cordially invited. J. C. BALCH, Sec. Bronson, Kans.

VERMONT.—The next annual convention of the Vermont Bee-Keepers' Association will be held in Middlebury, Vt., on Jan. 30 and 31, 1895. Programs will be prepared and mailed later. Let every Vermont bee-keeper begin now to prepare to attend, and all those who can reach Middlebury, whether you live in Vermont or not, we want you to come. Barre, Vt. H. W. SCOTT, Sec.

INDIANA.—The Indiana State Bee-Keepers' Association will hold its fifteenth annual meeting at the State House, Indianapolis, on Jan. 9, 1895. There will be three sessions—morning, afternoon and evening. Several other associations will convene here at the same time, thus securing reduced rate of 1½ fare for the round trip, but a certificate must be asked for when purchasing your ticket. Programme will be issued in December. WALTER S. POWDER, Pres. Indianapolis, Ind.

One-Cent Postage Stamps we prefer whenever it is necessary to send stamps for fractions of a dollar. By remembering this, you will greatly oblige us.

Honey & Beeswax Market Quotations.

CHICAGO, ILL., Dec. 27.—Up to the present the sales on honey have met with our expectations. We have received considerably more honey than we figured on handling, owing to the short crop report, and we think the early shippers reaped the benefit. However, we are now getting the average price, viz.: Fancy, 15c.; white, No. 1, 14@13c. Extracted, 6@7c. Beeswax, 28@29c. J. A. L.

CHICAGO, ILL., Dec. 27.—The trade is taking some comb honey for holiday display. This helps out all the choice lots, which bring 15c. per pound; other grades that are good to choice, 13@14c. The dark grades as usual are slow of sale at 9@10c. Extracted sells chiefly at 6@6½@7c. Very little basswood or clover is offered in 60-lb. tins, two in a case. Such meet with ready sale at top prices. Beeswax scarce at 28c. R. A. B. & Co.

NEW YORK, N. Y., Dec. 20.—The market for comb and extracted honey is good, and the supply equals the demand. Fancy clover and buckwheat sells best; off grades are not quite as salable; and 2-pound sections are little called for. We quote as follows: 1-pound fancy clover, 13@14c.; 2-pound, 12½@13c.; 1-pound white, 12@12½c.; 2-pound, 12c.; 1-pound fair, 10@11c.; 2-pound, 10@11c.; 1-pound buckwheat, 10@11c.; 2-pound, 9@10c. Extracted, clover and basswood, 6@6½c.; buckwheat, 5@5½c.; Southern, 50@60c. per gallon. Beeswax, scarce and in good demand at 29@30c. C. I. & B.

CINCINNATI, O., Dec. 21.—No change since our last. The market is quiet, with a fair demand at 14@16c. for best white comb honey, and 4@7c. for extracted. Beeswax is in good demand at 22@27c. for good to choice yellow. C. F. M. & S.

KANSAS CITY, Mo., Dec. 26.—The supply of comb honey is fair; demand is fair. Supply of extracted is good; demand light. We quote: 1-lb., No. 1 white, 14@15c.; No. 2 white, 12@13c.; No. 1 amber, 13@14c.; No. 2 amber, 10@11c. Extracted, white, 6@7c.; amber, 5½@6c.; dark, 4½@5c. Beeswax, 22@25c. C. C. C. & Co.

ALBANY, N. Y., Dec. 26.—Honey in better demand, especially the high grades of white comb honey. We quote: No. 1 white, 14@15c.; No. 2 white, 13@14c.; Mixed white, 11@12c.; No. 1 buckwheat, 12@12½c.; No. 2 buckwheat, 11@11½c.; common, 10@11c. Extracted, white (Northern), 7@8c.; amber, 6½c.; buckwheat, 5½@6c. Beeswax, 27@29c. Do not look for much of any change in these prices, and advise now to have honey on the market as early as possible for best prices. H. R. W.

BUFFALO, N. Y., Dec. 17.—The demand for honey is very quiet. We quote: Fancy, 13@14c.; choice, 11@12c.; others from 8@10c. Literal amount of stock in market. The prospects are that the demand will be very light until after the holidays. Extracted is moving very slowly at 5@7c. B. & Co.

NEW YORK, N. Y., Dec. 26.—The receipts of comb honey have been very large and exceed those of former years by far. The demand has not been very active of late and there are no signs of improvement. The supply is accumulating and the prices show a

downward tendency. We quote: Fancy white, 1-lb., 13@14c.; fair white, 11@12c.; buckwheat, 9c. Two-pound sections are in very light demand and sell at from 1@2c. a pound less. The market on extracted is quiet, with plenty of supply of all kinds. We quote: White clover and basswood, 6c.; Southern, 50@55c. per gal. Beeswax is firm and in good demand at 30@31c. H. B. & S.

List of Honey and Beeswax Dealers,

Most of whom Quote in this Journal.

Chicago, Ills.

J. A. LAMON, 43 South Water St.
R. A. BURNETT & Co., 163 South Water Street.

New York, N. Y.

F. I. SAGE & SON, 183 Reade Street.
HILDRETH BROS. & SEGELKEN, 28 & 30 West Broadway.
CHAS. ISRAEL & BROS., 110 Hudson St.
I. J. STRINGHAM, 105 Park Place.
FRANCIS H. LEGGETT & Co., 128 Franklin St.

Kansas City, Mo.

CLEMOMS-MASON COM. Co., 423 Walnut St.

Albany, N. Y.

H. R. WRIGHT, 326 & 328 Broadway.

Buffalo, N. Y.

BATTERSON & Co., 167 & 169 Scott St.

Hamilton, Ills.

CHAS. DADANT & SON.

Cincinnati, Ohio.

C. F. MUTH & SON, cor. Freeman & Central avs.

RUDY'S PILE SUPPOSITORY

Is guaranteed to cure Piles and Constipation, or money refunded. 50 cents per box. Send two stamps for circular and free Sample to MARTIN RUDY, Registered Pharmacist, Lancaster, Pa. NO POSTALS ANSWERED. For sale by all first-class druggists everywhere. Peter Van Schaack & Sons, Robt. Stevenson & Co., Morrison, Plummer & Co., and Lord, Owen & Co., Wholesale Agents, Chicago, Ills. Please mention the Bee Journal. Nov 15

Advertisements.

HAVE YOU HEARD THE LATEST?

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Question-Box.

In the multitude of counsellors there is safety.—Prov. 11-14.

A Bee-Book or a Bee-Paper—Which for the Beginner?

Query 954.—Not knowing anything about bee-keeping, is it better for me to buy a bee-book or spend the same amount of money for a bee-paper?—N. C.

Buy a bee-book.—M. MAHIN.

Buy a bee-book.—W. G. LARRABEE.

Buy a bee-book first.—DADANT & SON.

Both! If only one—the bee-paper.—W. M. BARNUM.

You ought to have both.—MRS. J. N. HEATER.

Get both; but you need the bee-book most.—J. A. GREEN.

Book first—journal next. You will want both.—EUGENE SECOR.

Buy a bee-book, and spend the same amount for a paper also.—P. H. ELWOOD.

Spend your money for a good paper, and you will want the books later.—H. D. CUTTING.

Never try to do without both; but between them, I would take the bee-paper.—B. TAYLOR.

You need the bee-book to start you, and the bee-papers to keep you started.—JAS. A. STONE.

Get a book, and then earn money enough some way to get the paper, too.—C. C. MILLER.

You want them both. If you cannot afford to post up, better let the bees alone.—E. FRANCE.

Invest a dollar for a bee-book, and another dollar for the American Bee Journal.—J. P. H. BROWN.

By all means buy a good standard work on bee-culture. Take the bee-papers, also.—J. M. HAMBAUGH.

Buy a standard work that covers the ground. Better follow one expert than many novices.—MRS. L. HARRISON.

You cannot afford to be without either, though for a time you could better dispense with the paper than the book.—R. L. TAYLOR.

You certainly need a book, as the paper does not consider all topics. You also should take one of the best journals—as the American Bee Journal.—A. J. COOK.

You should have a standard work on bees, by all means; but why not also take one or more "bee-papers," and keep posted on what is going on?—C. H. DIBERN.

Buy a book. Read it until you can tell all there is in it, then take a bee-paper. No bee-keeper that is worthy of the name will do without both.—G. M. DOOLITTLE.

If you cannot raise money enough to get both, you would better not try bee-keeping just yet. You should get the book first, then the bees, and next the paper.—EMERSON T. ABBOTT.

The book will be the most valuable for you on the start, as you can find something in it to fit every case, and for all times of the year. I should also want the paper as soon as possible.—S. I. FREEBORN.

Don't fool away any time in the "student" business, as some advise, but buy several good bee-books, and then subscribe for as many bee-papers as you can afford, and experience will do the rest.—G. L. TINKER.

Knowing what I do now, I would get a good bee-book and all the bee-papers I could afford. But to come down to your question direct, I will say I don't know which would be best for you. In either case, you won't have one long till you have both, if you are going to make a bee-keeper.—MRS. JENNIE ATCHLEY.

If I could not have both—standard books and bee-papers—I would take the paper. But neither will do any good unless you get a colony of bees and put your knowledge to practice, in a practical way. But surely you could muster enough cash to get a good, practical book. It will open your eyes.—G. W. DEMAREE.

Buy a bee-book, and study thoroughly, so that you may learn the theory and general principles, so that you may know how to begin. It is equally essential to take some good live bee-paper—the American Bee Journal is as good as the best—in order to keep in touch with new ideas and new experiences, for bee-keeping is progressive, and the bee-papers keep us posted on that progress.—J. E. POND.

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CONVENTION DIRECTORY.

Time and place of meeting.

1895.
Jan. 9.—Indiana State, at Indianapolis, Ind. Walter S. Pouder, Pres., Indianapolis, Ind.
Jan. 9, 10.—Minnesota State, at Lake City. Wm. Danforth, Sec., Red Wing, Minn.
Jan. 21, 22.—Colorado State, at Denver, Colo. H. Knight, Sec., Littleton, Colo.
Jan. 22-24.—Ontario, at Stratford, Ont. W. Couse, Sec., Streetville, Ont.
Jan. 25, 26.—Ontario Co., at Canandaigua. Ruth E. Taylor, Sec., Bellona, N. Y.
Jan. 28.—Venango Co., at Franklin, Pa. C. S. Pizer, Sec., Franklin, Pa.
Jan. 30, 31.—Vermont, at Middlebury, Vt. H. W. Scott, Sec., Barre, Vt.
Feb. 6, 7.—Wisconsin, at Madison, Wis. J. W. Vance, Cor. Sec., Madison, Wis.
Mar. 16.—S. E. Kansas, at Bronson, Kan. J. C. Balch, Sec., Bronson, Kan.
May 6.—Southern Minnesota, at LaCrescent. E. C. Cornwell, Sec., Winona, Minn.

In order to have this table complete. Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

North American Bee-Keepers' Association

OFFICERS FOR 1895.

PRES.—R. F. Holtermann, Brantford, Ont.
VICE-PRES.—L. D. Stillson, York, Nebr.
SECRETARY.—W. Z. Hutchinson, Flint, Mich.
TREASURER.—J. T. Calvert, Medina, Ohio.

National Bee-Keepers' Union.

PRESIDENT—Hon. R. L. Taylor, Lapeer, Mich.
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Binders for this size of the American Bee Journal we can furnish for 75 cents each, postpaid; or we will club it with the Bee Journal for a year—both for \$1.00. We have a few of the old size (6x9) Binders left, that we will mail for only 40 cents each, to close them out.

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"I like the American Bee Journal very much, and have been a reader many years."—Mrs. Josiah Smith, of Minnesota, Nov. 26, 1894.

"I can't get along without the American Bee Journal, even if times are hard. Bee-keepers around here say they can't afford to take it. They all keep bees, but get no honey because they take no paper."—Chas. L. Glidden, of Minnesota, Dec. 21, 1894.

"I have taken the American Bee Journal just a year, and would not think of doing without it. Why, it is just like being in a bee-convention every week. There are Mrs. Atchley, Dr. Miller, and others, having their say on bees, etc. Why, it is simply immense! Put me down on your subscription list to stay."—Jas. A. Minnick, of Indiana, Dec. 15, 1894.

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See the Clubbing Offers in this Number.

General Items.

Results of the Past Season.

I had 6 colonies of bees, spring count, and increased to 8. They gave me 334 pounds of comb honey, of which 144 was clover, and netted me 15 cents per pound, and 190 of buckwheat, at 13 cents per pound. My neighbors found fault with the season, and say it was a poor one. This is the fourth year that I have handled bees. I am making it a study, and read all the bee-literature that I can get hold of. I like it very much.

The American Bee Journal is the best bee-paper I know of, and gives the most reading for \$1.00 that I know of.

C. A. BILLINGS.

Clyde, N. Y., Dec. 24.

Got Plenty for Winter Stores.

This has been a bad season for the bees, on account of the dry weather. I had 17 colonies in the spring and had only one swarm. I did not get a pound of surplus honey, but they have plenty for winter. We hope for a better season next year.

OTTO F. SEMKE.

Harrison, Kans., Dec. 22.

Glorious Rains in Southern California.

The present year has been disastrous to bee-keepers in southern California. The insufficiency of rain during the past spring failed to infuse the life-giving qualities into the honey-plants, consequently the fatality among the "busy bees" in this locality was very great. The long drought was broken ten days ago, and mother earth has discarded her seared robe for one of living green. The flood gates of Heaven were opened this morning, and a continuous down-pour of rain for the past ten hours is the result.

J. M. CROW.

Encinitas, Calif., Dec. 19.

Not a Pound of Good Honey.

Honey was a total failure in this section last summer. I didn't get a pound of good honey from 60 colonies of bees. I had to feed some for winter.

J. C. HENDRICKS.

Decatur, Ill., Dec. 20.

Bee-Keeping in Alabama.

This was the sorriest year here for honey yet. The freeze we had in April destroyed the honey crop till the month of June. There were plenty of hungry bees up till then, and then they got some honey. I got 30 pounds of honey and increased from 10 to 14 colonies. My bees are in the best condition for winter that I ever had them in, or at least they are all strong in bees. All seem to be healthy, as they have not been confined to their hives a day this fall, and have enough honey in each hive to winter two colonies of bees, as the fall flow was good, and as I would not take it from them. The bees were preparing for winter while I was waiting for my time to come next year. I farm for a living, but I don't forget my bees. I go and see them three times a day.

Bees that are lost in this part of the

country suffer from being queenless, or weak, and then the moth-worms take possession of the combs; that is the only thing that I have known to cause any loss of bees, outside of starving to death. There were some bees frozen to death here last winter, but such a winter as that was we have not had in this country for a long time.

My sweet clover grew from one to three feet high sown last spring, and we had no rain from May 4 to August 3. It is the first sweet clover seen in this part of the country. My alfalfa grew to 10 inches high, and bloomed. It was a sight to people here. I am just trying a little of each to see what they will do in this locality.

M. W. GARDNER.

Bankston, Ala., Dec. 4.

Bees in Poor Condition.

I had no honey this year. I had 235 colonies of bees one year ago, and now I have not more than 75, and those in poor condition. I have been keeping bees in this State since 1881, and have always had a good, fair crop until this year. But I am hoping for next year. I presume there will be thousands of colonies lost during the years of 1894 and 1895 in Southern California. But we have just had a fine rain, which gives us hope for another year.

C. C. THOMAS.

Murietta, Calif., Dec. 20.

He Prefers the Gallup Frame.

I had 30 colonies, spring count, in "long-idea" hives, and 31 pounds was the average, all late honey. The white clover blossomed, but yielded no nectar. I use the Gallup frame. The Langstroth frame does not seem to winter bees as well here as a deeper frame. There are not many Langstroth frames in use here any more. I seem to be more successful with the Gallup than my neighbors are with the Langstroth frame.

The "Old Reliable" comes weekly, and is just what bee-keepers want.

L. B. WHITNEY.

Covington, Pa., Dec. 10.

Report for 1894—T Super, Etc.

My report for 1894 is as follows: Comb honey in one-pound sections, 2,500 pounds; extracted, 3,600 pounds. It was all fall honey, as we had no other. My bees are all in pretty good condition for winter. I also had a very fine lot of young queens this year—124 of 1894, 78 of 1893, 22 of 1892, and 2 of 1891. My bees were nearly non-swarmers this year—only 4 swarms from about 200 colonies.

The weather is still warm, and bees are flying every few days. My 225 colonies have been in the cellar over 35 days.

I would like to say something in regard to the "Townsend Section Folder," described on page 821 of the Bee Journal for June 28, 1894. Six years ago last spring I made the identical folder, and sent it to Mr. A. I. Root. Then I had him send it to Dr. Mason, who, I suppose, still has it. Now I am no "big gun," nor any fancy writer, but if any of our bee-friends will give me a call, I can show them as fine an apiary as there is in the State, and as fine a lot of bees.

I should like to say to Dr. Miller, if he

ever comes over this way, we would be very much pleased to have him give us a call. I am with the Doctor in the use of the T super case. I would not have any other, as it is the handiest and best all-around case, and the honey can be cleaned the fastest in it, with the least work.

N. STAININGER.

Tipton, Iowa, Dec. 24.

A Bee-Keeping Experience.

I sent for Dr. Tinker's "Bee-Keeping for Profit," not so much because I thought it would teach me how to get rich from my bees, but because I thought it might give me a little instruction as to how to get some honey (comb honey, as that is the kind I want) from my bees next year. I started an apiary near Seabright, N. J., last spring. On May 18 I received 5 colonies of bees, with five imported Italian queens. For the first three weeks it was cold and wet, and then the summer was very dry. Old bee-keepers tell me it was a very bad year for bees. I have increased my colonies to 8. I lost 3 of the imported queens.

I have taken ten one-pound sections of honey, and fed the bees about 150 pounds of sugar syrup. I did not get much honey, but I have one satisfaction—I still have the bees, and I think they are in good condition to go through the winter. I am a little like the fisherman, who said he did not care much for the fish, but it was not much fun fishing unless he could catch some. So it is with me, with the bees. I don't care so much for the honey, but it would be a great deal more interesting if I could get 50 or 150 pounds of nice comb honey from each of my colonies next year.

I shall commence feeding a little the last of February, or first of March, and try to have full colonies by apple blossom time. I feel pretty sure (after reading the American Bee Journal) that if any one wants honey, he must have bees, and plenty of them.

I. N. HOAGLAND.

Brooklyn, N. Y., Dec. 10.

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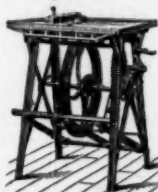
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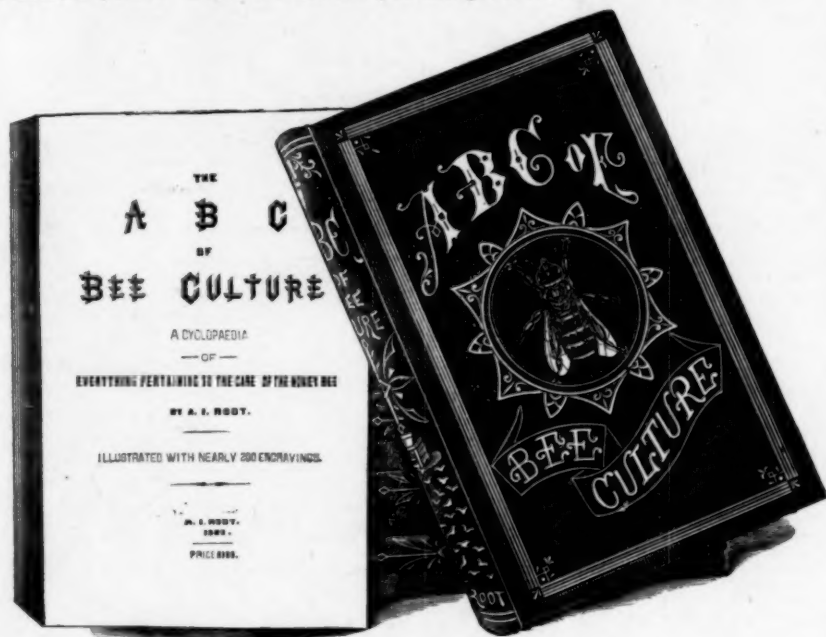
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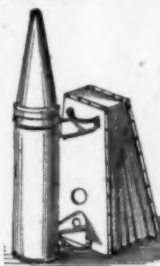
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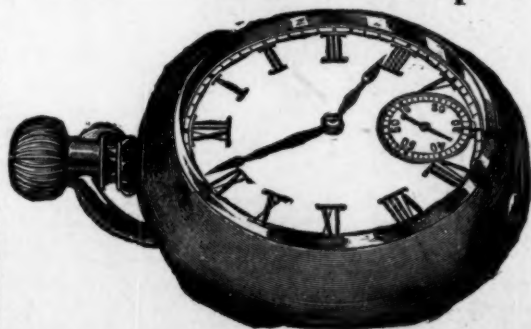
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